

FIG.1

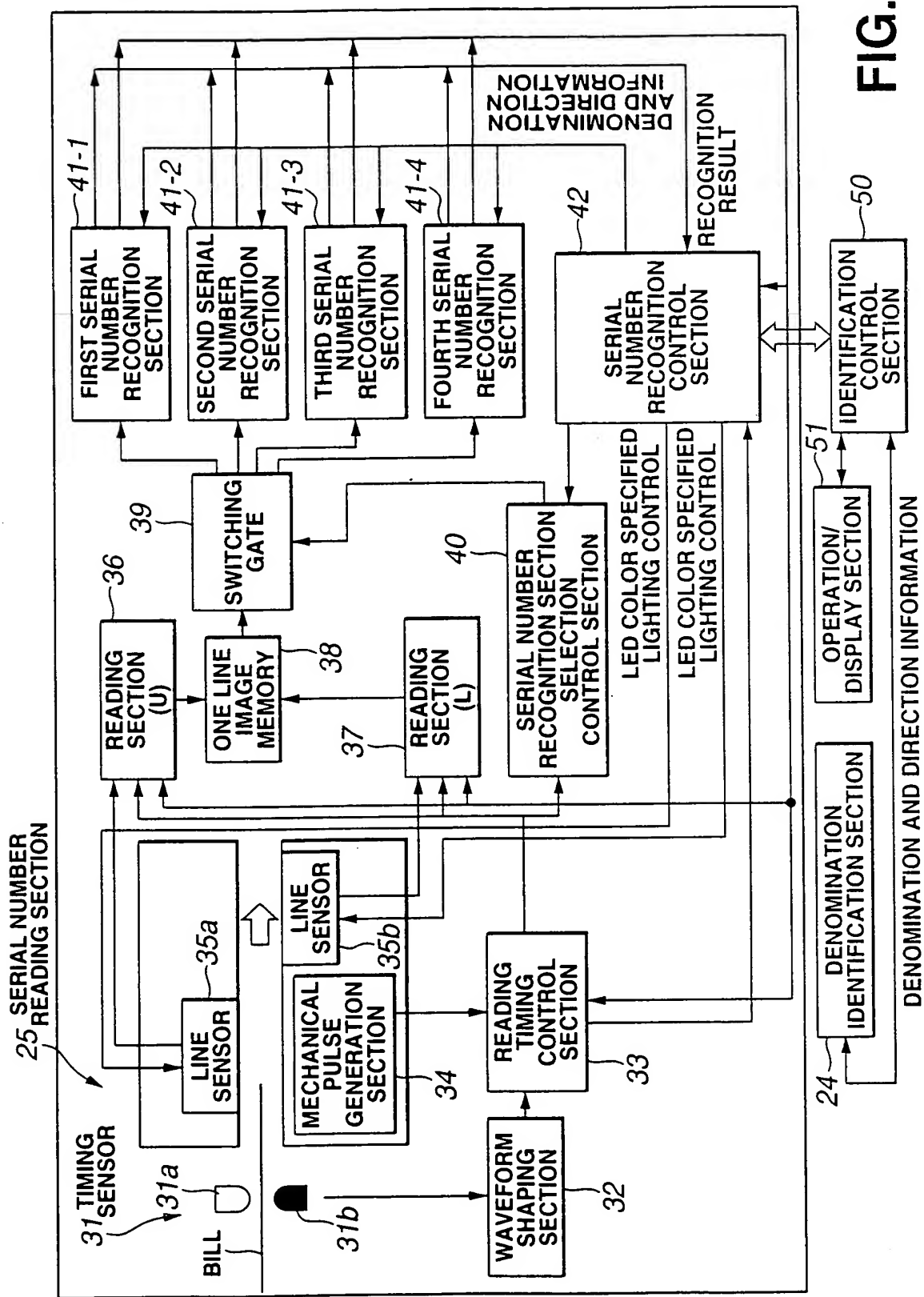


FIG. 2

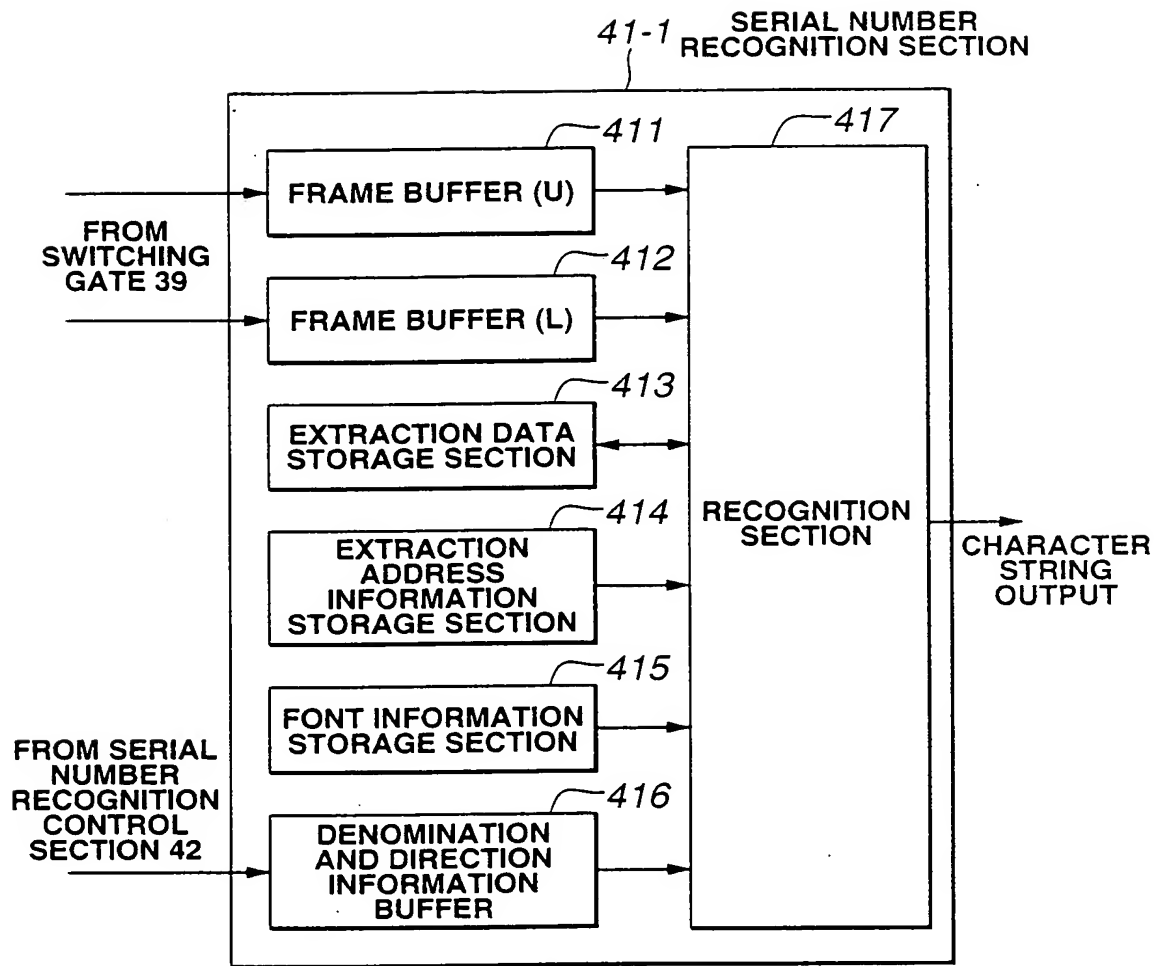


FIG.3

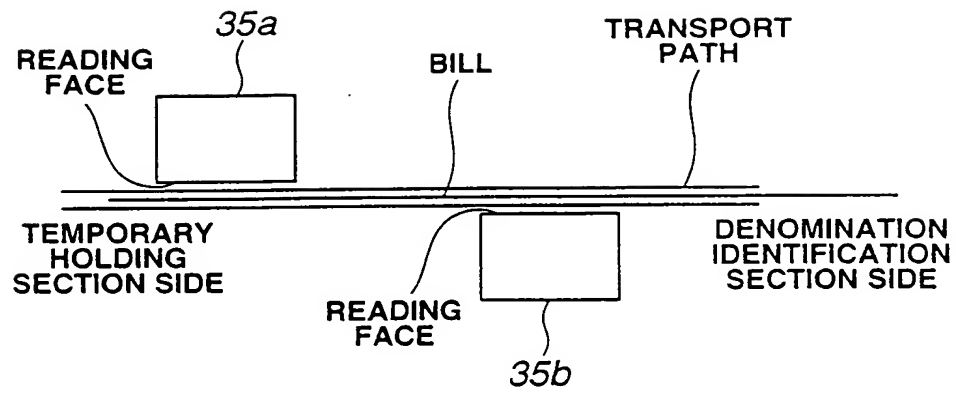


FIG. 4(a)

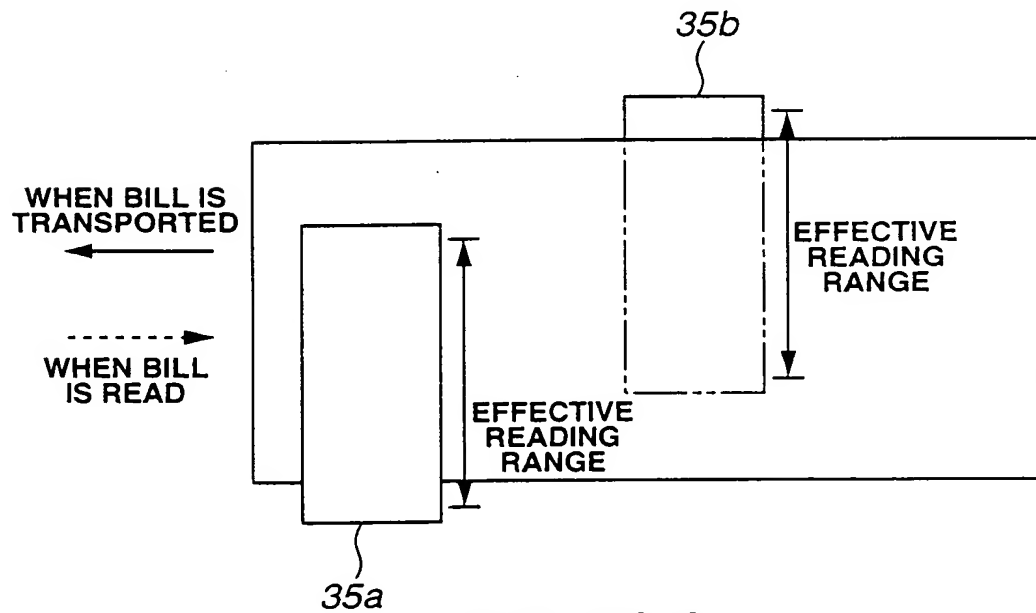


FIG. 4(b)

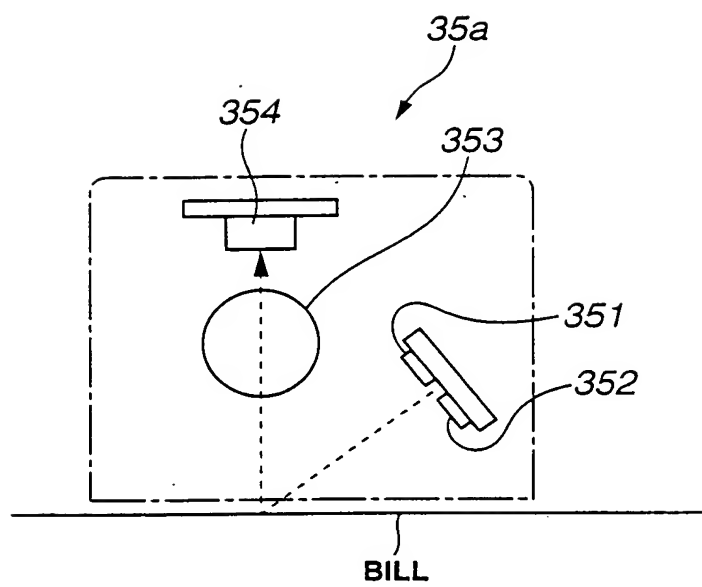
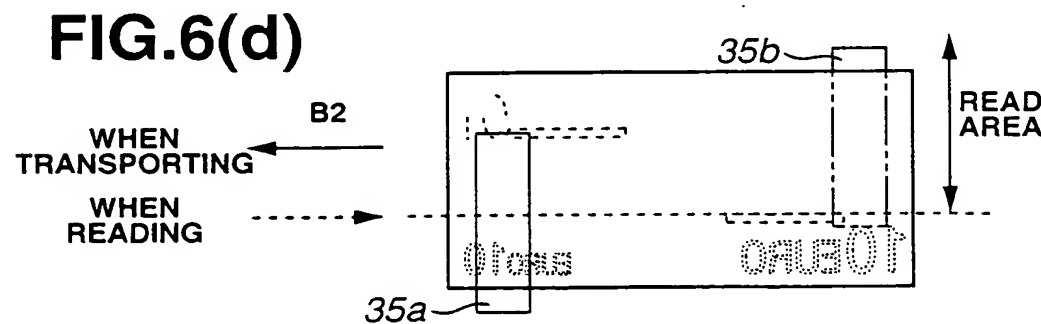
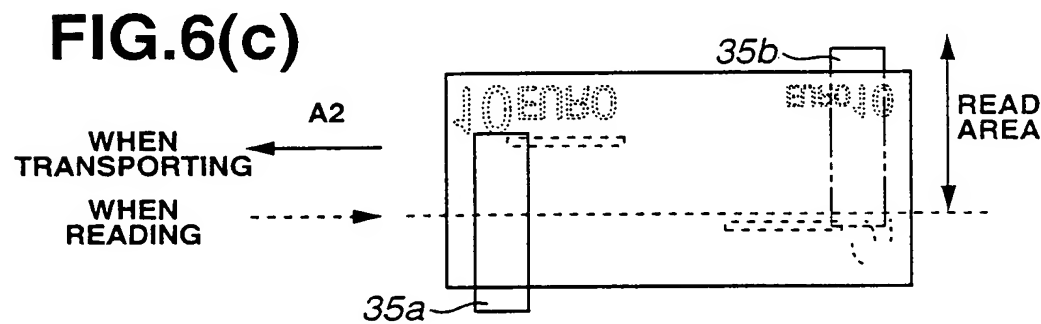
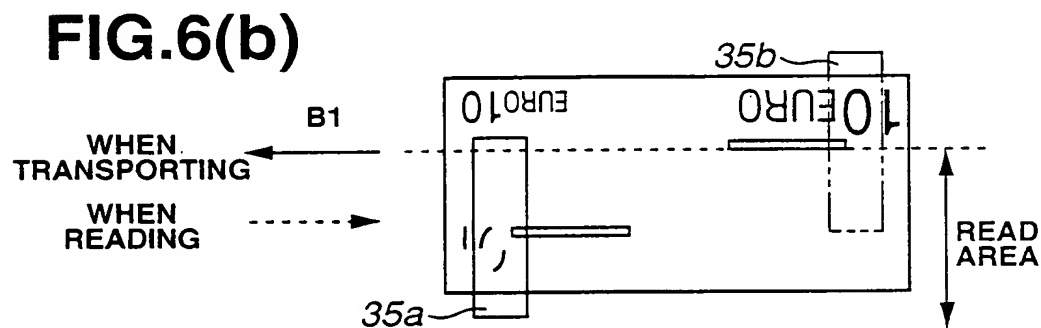
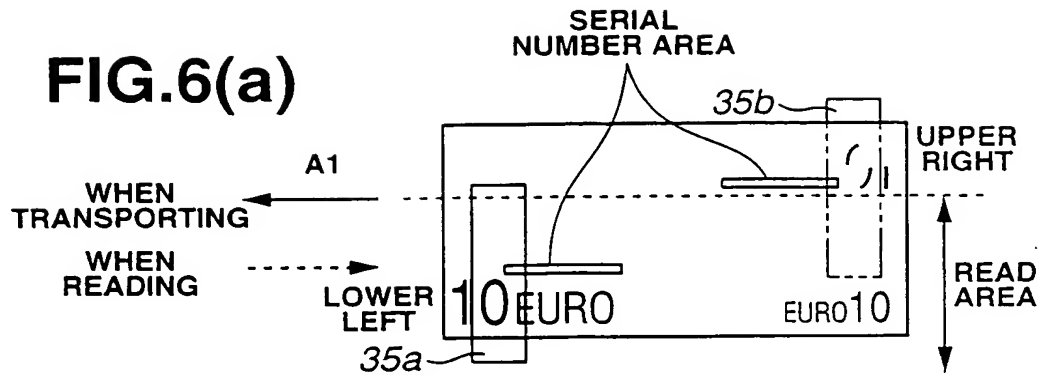


FIG.5



| DENOMINATION | POSITION | BACKGROUND COLOR | SERIAL NUMBER COLOR | LIGHT SOURCE |
|--------------|----------------|---------------------|---------------------------|-----------------|
| 5 EURO | LOWER LEFT | GRAY/ BLUE | GRAY | GREEN |
| 5 EURO | UPPER RIGHT | GRAY | BLACK | GREEN |
| 10 EURO | LOWER LEFT | GRAY/ RED | DARK RED | GREEN |
| 10 EURO | UPPER RIGHT | RED | BLACK | RED |
| 20 EURO | LOWER LEFT | GRAY/ BLUE | DARK BLUE | GREEN |
| 20 EURO | UPPER RIGHT | BLUE | BLACK | GREEN |
| 50 EURO | LOWER LEFT | GRAY/ YELLOW | DARK BROWN | RED |
| 50 EURO | UPPER RIGHT | BROWN | BLACK | RED |
| 100 EURO | LOWER LEFT | GRAY/ GREEN | DARK GREEN | RED |
| 100 EURO | UPPER RIGHT | GREEN | BLACK | GREEN |
| 200 EURO | LOWER LEFT | GRAY/ YELLOW | DARK YELLOW | RED |
| 200 EURO | UPPER RIGHT | YELLOW | BLACK | RED |
| 500 EURO | LOWER LEFT | GRAY/ PURPLE | DARK PURPLE | RED |
| 500 EURO | UPPER RIGHT | PURPLE | BLACK | RED |
| 1 US \$ | | WHITE | GREEN | RED |

FIG.7

LIGHT SOURCE SELECTION TABLE

| DENOMINATION (EURO) | FEED DIRECTION | LINE SENSOR | LIGHT SOURCE (EMISSION COLOR) |
|------------------------|-------------------|----------------|--|
| 5 | A1 | TOP | GREEN |
| | A2 | BOTTOM | GREEN |
| | B1 | TOP | GREEN |
| | B2 | BOTTOM | GREEN |
| 10 | A1 | TOP | GREEN |
| | A2 | BOTTOM | GREEN |
| | B1 | TOP | RED |
| | B2 | BOTTOM | RED |
| ⋮ | ⋮ | | |
| 500 | A1 | TOP | RED |
| | A2 | BOTTOM | RED |
| | B1 | TOP | RED |
| | B2 | BOTTOM | RED |

FIG.8

**DENOMINATION/DIRECTION
MANAGEMENT TABLE**

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| ID NUMBER | DENOMINATION (EURO) | DIRECTION |
|--------------|------------------------|-----------|
| ID1 | 10 | A1 |
| ID2 | 10 | A2 |
| ID3 | 20 | B1 |
| ID4 | 20 | A1 |
| ⋮ | ⋮ | ⋮ |
| IDn | 50 | B2 |

FIG.9

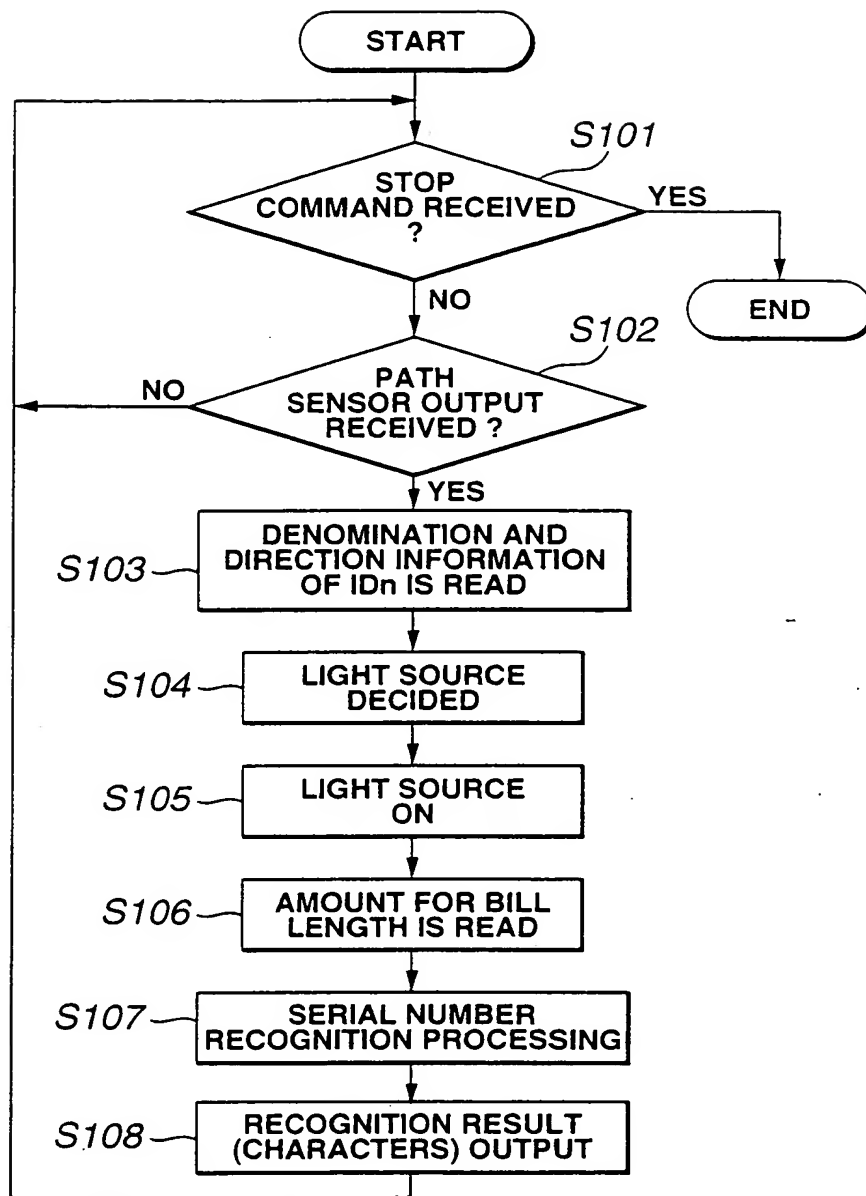


FIG.10

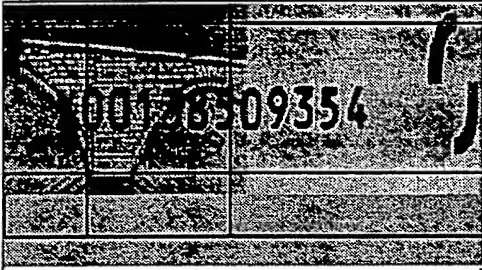
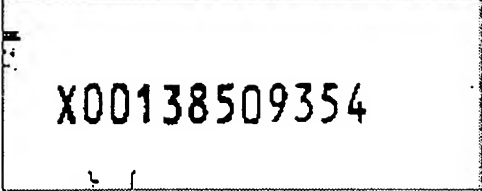
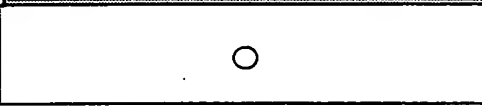
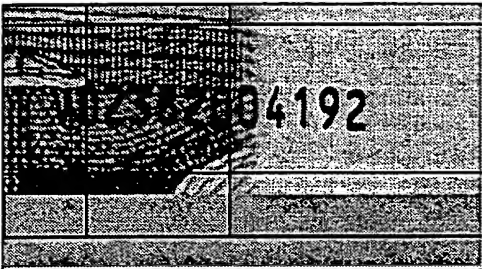
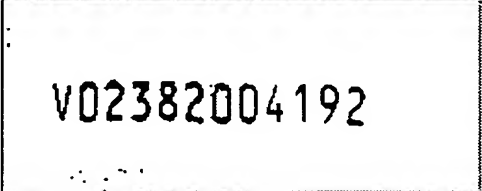

| LIGHT SOURCE | DENOMINATION | | | |
|--------------|--------------|--|--------------|--|
| GREEN | 20 EURO |  | GRAY IMAGE | |
| | |  | BINARY IMAGE | |
| | |  | JUDGMENT | |
| RED | 50 EURO |  | GRAY IMAGE | |
| | |  | BINARY IMAGE | |
| | |  | JUDGMENT | |

FIG.11

BEST AVAILABLE COPY

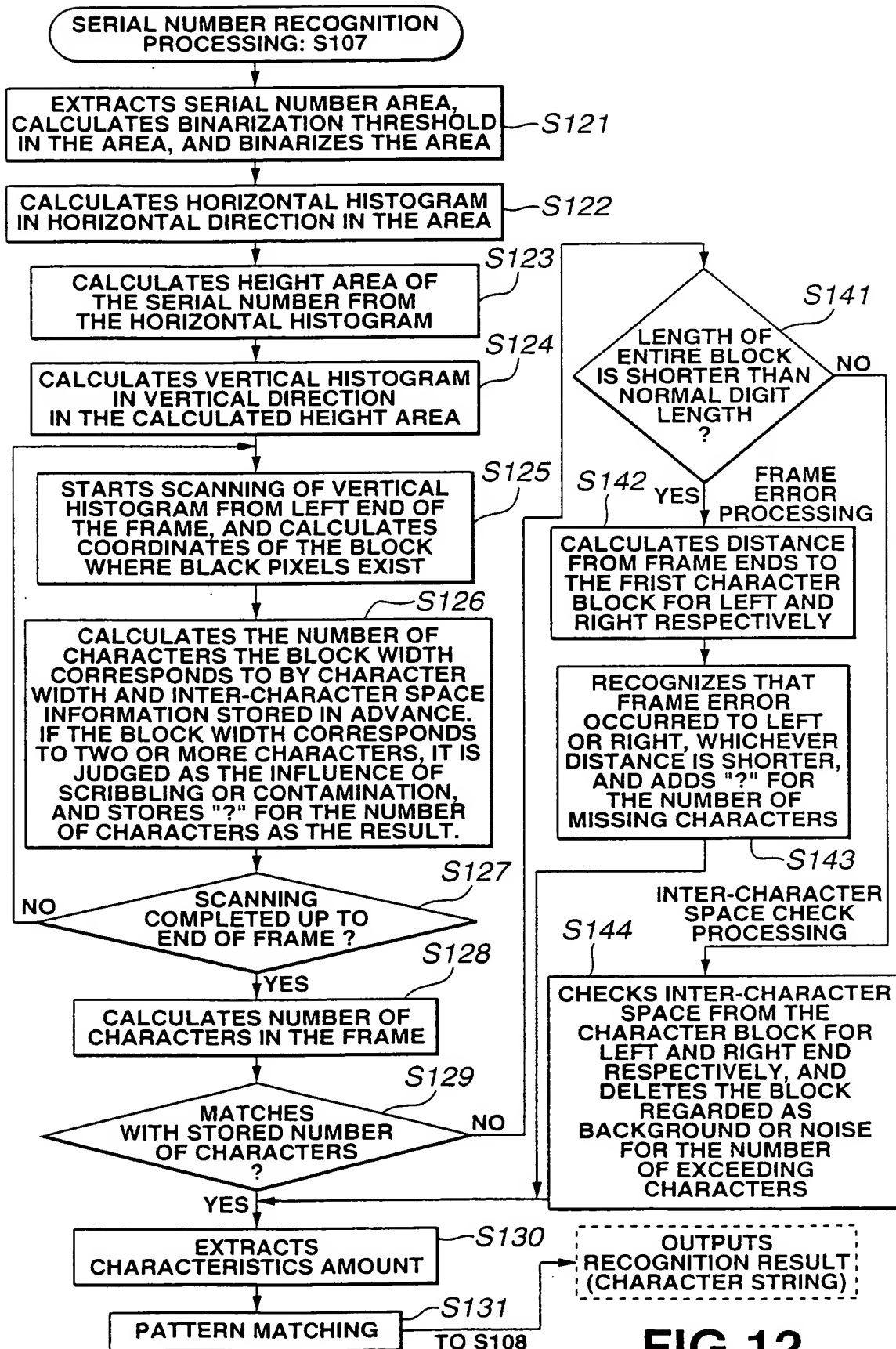


FIG.13(a)



FIG.13(b)

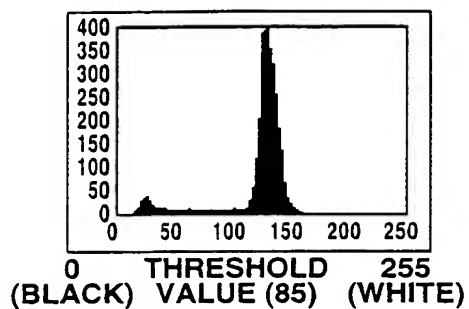


FIG.13(c)

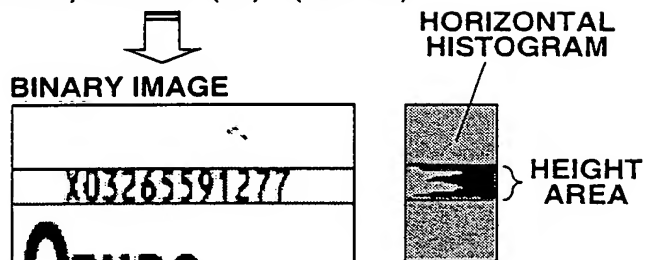


FIG.13(d)

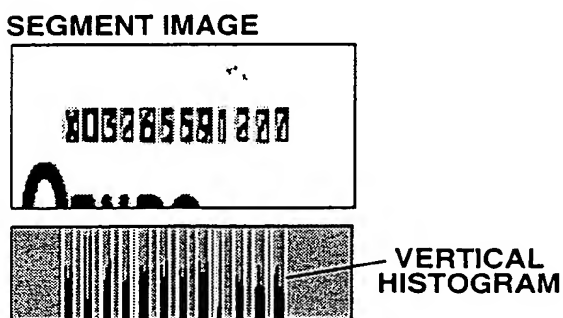


FIG.13(e)

SCANNING DIRECTION

CHARACTER BLOCK



BEST AVAILABLE COPY

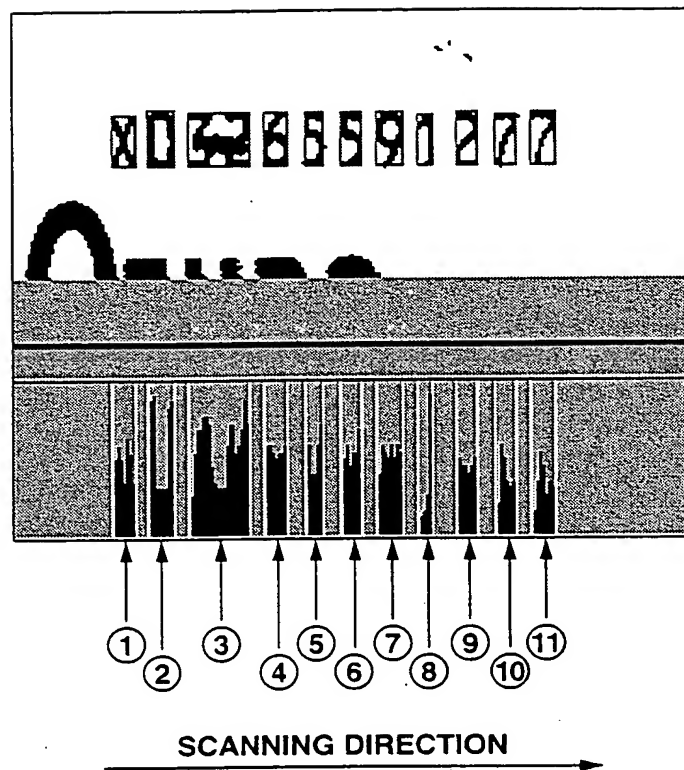


FIG.14(a)

RECOGNITION
RESULT

↓

X 0 ? ? 6 5 5 9 1 2 7 7

FIG.14(b)

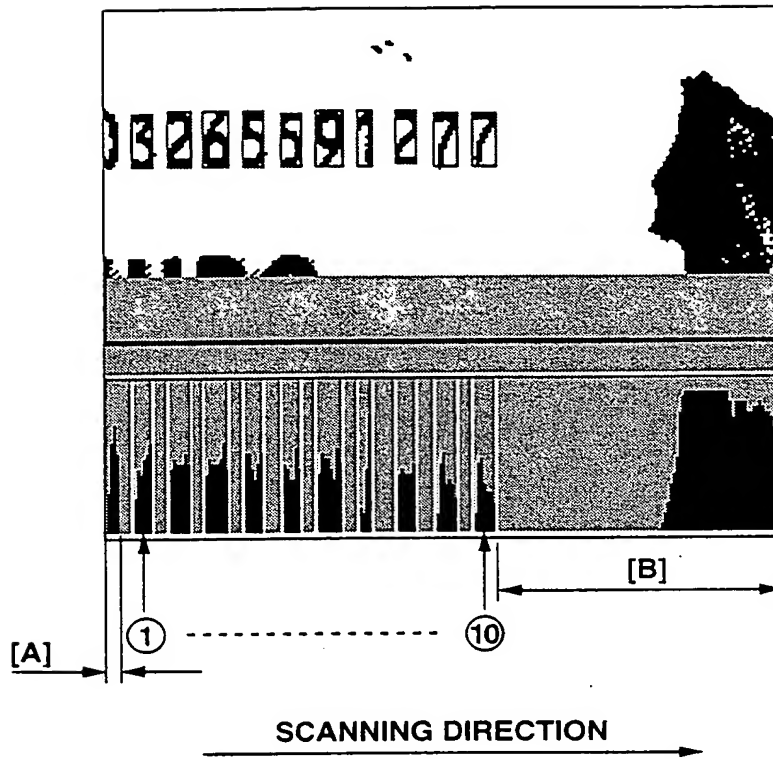


FIG.15(a)

RECOGNITION
RESULT



? ? 3 2 6 5 5 9 1 2 7 7

FIG.15(b)

BEST AVAILABLE COPY

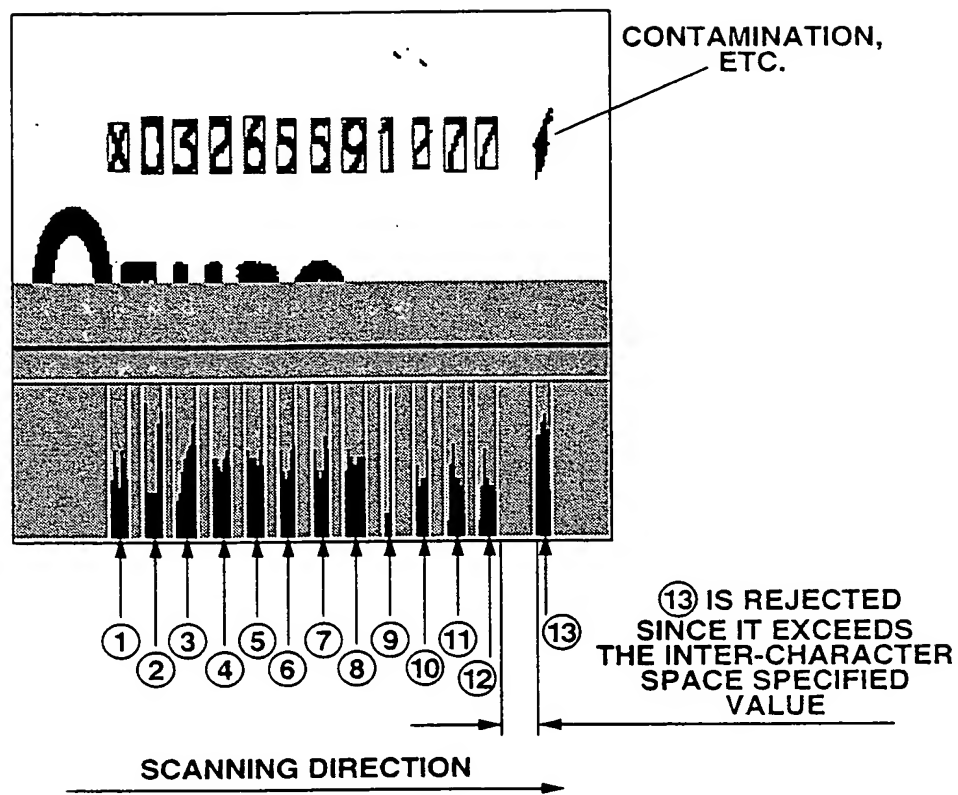
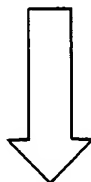


FIG.16(a)

RECOGNITION
RESULT



X 0 3 2 6 5 5 9 1 2 7 7

FIG.16(b)

BEST AVAILABLE COPY

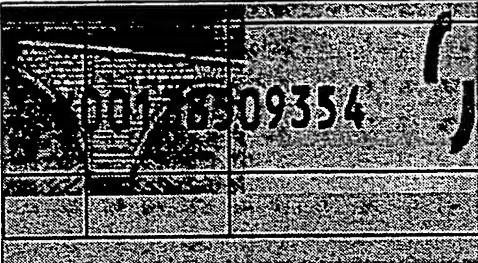
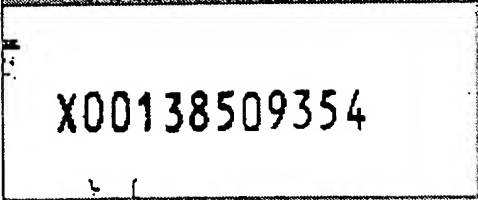


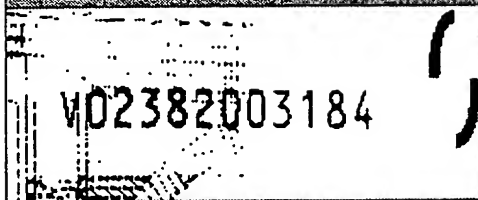
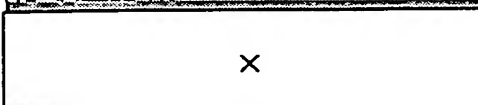
| LIGHT SOURCE | DENOMINATION | | | |
|--------------|--------------|--|--------------|--|
| GREEN | 20 EURO |  | GRAY IMAGE | |
| | |  | BINARY IMAGE | |
| | |  | JUDGMENT | |
| | 50 EURO |  | GRAY IMAGE | |
| | |  | BINARY IMAGE | |
| | |  | JUDGMENT | |

FIG.17

BEST AVAILABLE COPY

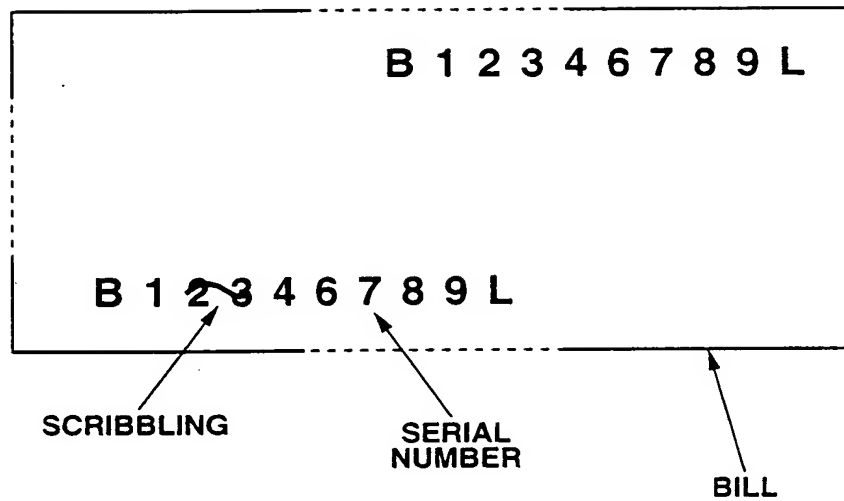


FIG.18